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Home Economics Research at Iowa State

By MELBA NISEWANGER and DOROTHY McDANIEL

Operation Cost of Electric Oven

"Electricity is now available to 15,000,000 homes in the United States," says Miss Zula M. Dowler in a thesis "A Study of the Operation Cost of an Electric Oven" prepared at Iowa State College. "Electricity is expensive, but an attempt to reduce the cost by adopting more efficient methods may make it more widely used."

Meat was chosen as the food used in determining the cost and efficiency of the oven, as many studies had already been made on meat and they could serve as information. Meat also is an expensive food product and requires a long process for preparation.

Skewers were used in some of the roasts and not in others. Roasts were started in both preheated ovens and in cold ovens.

For every five minutes the oven door was opened, it was estimated that there was a loss of 279 degrees of heat and one cent in cost of operation.

The meat in which skewers were used roasted in a shorter time than the one in which skewers were not used.

Placing meat in the cold oven had little effect on the amount of juice lost.

The six roasts which were begun in preheated ovens without skewers averaged 76 percent; the six begun in a preheated oven with skewers averaged 73 percent; the eight begun in cold ovens without skewers averaged 79 percent; the eight begun in the cold oven with skewers averaged 77 percent. The first group required on an average of 27 minutes per pound of meat; the second group, 22 minutes per pound of meat; the third group, 26 minutes per pound of meat, and the fourth group, 25 minutes per pound of meat.

Household Equipment

The research problems which have been chosen by three of the graduate students in Household Equipment for work toward the Master's degree; are concerned with three very different types of activity in the field of Household Equipment.

Mrs. Vivian Brashear has chosen as her problem: "A Plan of Teaching the Beginning Course in Household Equipment to College Girls." Prof. J. B. Davidson, head of the Agricultural Engineering Department, and Prof. W. H. Lancelot, head of the Vocational Education Department, are cooperating with Mrs. Brashear in this project.

"Refrigeration for the Iowa Farm Home," is the problem chosen by Grace L. Pennock. Miss Pennock will work under the direction of Prof. Davidson and Miss Harriett Brigham, a member of the Household Equipment faculty.

Lucille Harris, a graduate of the

June, '27, class, has chosen as her problem: "Design and Construction of an Electric Kitchen Cabinet and Unit Appliances to Replace Kitchen Range and Pans."

Reference literature and preliminary plans of work have already been completed for these projects.

Textiles and Clothing

Miss Alice Rosenberger, who now has a part-time position in the Department of Textiles and Clothing, finished the work for her Master's degree in that department last quarter. She did an interesting piece of work on "The Use of the Problem Method in the Teaching of Clothing in College," which was a continuation of a thesis written by Miss Stella Schrack last year.

Miss Rosenberger took, as a basis for her study, a group of problems for a beginning course in textiles, and a set of problems which she had used in her teaching at Des Moines University. These, as well as the original problems from Miss Schrack's thesis, were scored, restated, arranged in series and later rescored by the teachers in the Departments of Vocational Education, Home Economics Vocational Education and Textiles and Clothing.

The method used in scoring was one which has been worked out by Prof. W. H. Lancelot, head of the Vocational Education Department, his staff and students. This score card has been used in this department of vocational education for six years. Each year improvements have been made. The score card is as follows:

- | | |
|---|----|
| (1) Should be drawn from actual life (i. e.) representing a typical life situation | 5 |
| (2) Should be interesting in itself or connected with other things that are interesting | 5 |
| (a) external connections. | |
| (b) internal connections. | |
| (c) involve at least one natural impulse. | |
| (3) Must be clear and definite in statement | 5 |
| (4) Should be of proper scope and difficulty | 5 |
| (5) Should call for good thinking | 5 |
| Total | 25 |

A total score of 25 represents 100%, or perfect (25 x 5).

More than \$2,000,000 a year is spent in the United States for the education of 27,000,000 school children, according to the figures given out by the National League of Compulsory Education.

Relation of Fuels to Water Heating

"Running hot water in the home is no longer a luxury; because of its value in the processes and sanitation of the home it is an absolute necessity," says Grace E. Harribine in a thesis prepared at Iowa State College on "A Study of the Cost and Efficiency of Different Types of Fuel Used for Domestic Water Heating."

In running this experiment, Miss Harribine used electricity, gas, acetylene, coal and kerosene as the various kinds of fuel in determining the kind of a heater that was cheapest, fastest, most convenient and most efficient.

The average daily consumption of water used per individual was calculated as 10 gallons at 120 degrees F. The cost is 40c to \$1.50 a month per individual for 24 hour service. The average amount of water used by a family was 44 gallons.

In making the tests, the apparatus was all standardized. Readings were taken of the room temperature, fuel meter at beginning and end, time at beginning and end of test and amount in pounds of water heated.

The results of the test showed that electricity was the most expensive, most convenient and slowest; kerosene was cheapest, and ranked only medium in the other factors; coal was the least efficient and the least expensive, and acetylene was next to electricity in expense, but was fairly efficient.

It was found that the immersion blade type of an electric water heater is the cheapest and most efficient.

Institutional Administration

Several research problems in the Department of Institutional Administration are under way. Following is a list of the graduate students and the subjects on which they are working: Mildred King, "Equipment for the Memorial Union Building;" Cleo Holmes, "Standardized Large Quantity Cooking Formulae;" Jennie Shaw, "School Lunch Room in the State of Iowa;" Hazel Schrack, "Courses of Instruction in Institutional Management."

Male Bathing Beauties

A male bathing beauty contest that attracted 65 entrants was successfully conducted by the Birmingham Post last summer. The event drew the biggest crowd at Birmingham's chief amusement park. One hundred dollars in cash were given to the "prettiest" man and handsome prizes for the man with nearest perfect measurements and the man with the prettiest leg.